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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/630,978	07/31/2003	Mitsuhiro Kataoka	01-455	1853

23400 7590 03/12/2004

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EXAMINER

PHAM, LONG

ART UNIT PAPER NUMBER

2814

DATE MAILED: 03/12/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

<b>Office Action Summary</b>	<b>Application No.</b> 10/630,978	<b>Applicant(s)</b> KATAOKA ET AL.	
	<b>Examiner</b> Long Pham	<b>Art Unit</b> 2814	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

#### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
  - If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
  - If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
  - Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

#### Status

- 1) ☐ Responsive to communication(s) filed on \_\_\_\_.
- 2a) ☐ This action is **FINAL**.                      2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

#### Disposition of Claims

- 4) ☒ Claim(s) 1-10 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-10 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_ are subject to restriction and/or election requirement.

#### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

#### Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All    b) ☐ Some \*    c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.

#### Attachment(s)

- |   |  |
|---|--|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892)  | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. ____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)  | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152)            |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)<br>Paper No(s)/Mail Date <u>07/31/03</u> | 6) <input type="checkbox"/> Other: ____  |

**DETAILED ACTION**

***Claim Rejections - 35 USC § 112***

1. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

2. Claims 1-10 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

In claim 1, line 3, it is unclear what surface of the substrate would be considered as off-oriented surface and where the {0001} surface located.

In claim 1, line 3, it is unclear what direction would be considered as off-axis direction. Also, it is unclear what axis is being referred to. Also, it is unclear where  $\langle 11-20 \rangle$  direction is located.

In claim 2, line 3, it is unclear what surface of the substrate would be considered as off-oriented surface and where the {0001} surface located.

In claim 2, line 3, it is unclear what direction would be considered as off-axis direction. Also, it is unclear what axis is being referred to. Also, it is unclear where  $\langle 1-100 \rangle$  direction is located.

In claim 3, line 3, it is unclear what surface of the substrate would be considered as off-oriented surface and where the {0001} surface located.

In claim 3, line 3, it is unclear what direction would be considered as off-axis direction. Also, it is unclear what axis is being referred to. Also, it is unclear where  $\langle 11-20 \rangle$  direction is located.

In claim 3, line 6, it is unclear what "{1-100}" surface is being referred to.

In claim 4, line 3, it is unclear what surface of the substrate would be considered as off-oriented surface and where the {0001} surface located.

In claim 4, line 3, it is unclear what direction would be considered as off-axis direction. Also, it is unclear what axis is being referred to. Also, it is unclear where  $\langle 1-100 \rangle$  direction is located.

In claim 4, line 6, it is unclear what " $\{11-20\}$ " surface is being referred to.

In claim 5, line 3 and claim 6, line 3, it is unclear what surface of the substrate would be considered as off-oriented surface and also it is unclear what direction would be considered as off-axis direction.

In claim 7, line 3, it is unclear what surface of the substrate would be considered as off-oriented surface and where the  $\{0001\}$  surface located.

In claim 7, line 3, it is unclear what direction would be considered as off-axis direction. Also, it is unclear what axis is being referred to. Also, it is unclear where  $\langle 11-20 \rangle$  direction is located.

In claim 8, line 3, it is unclear what surface of the substrate would be considered as off-oriented surface and where the  $\{0001\}$  surface located.

In claim 2, line 3, it is unclear what direction would be considered as off-axis direction. Also, it is unclear what axis is being referred to. Also, it is unclear where  $\langle 1-100 \rangle$  direction is located.

In claim 8, line 6, it is unclear where  $\{1-100\}$  surface is located.

In claim 9, line 3, it is unclear what is surface is " $\{11-20\}$ " surface.

In claim 9, line 6, it is unclear what plane is " $\{0001\}$ " plane.

In claim 10, line 3, it is unclear where  $\{1-100\}$  surface is located.

In claim 10, line 6, it is unclear what plane is " $\{0001\}$ " plane.

### ***Conclusion***

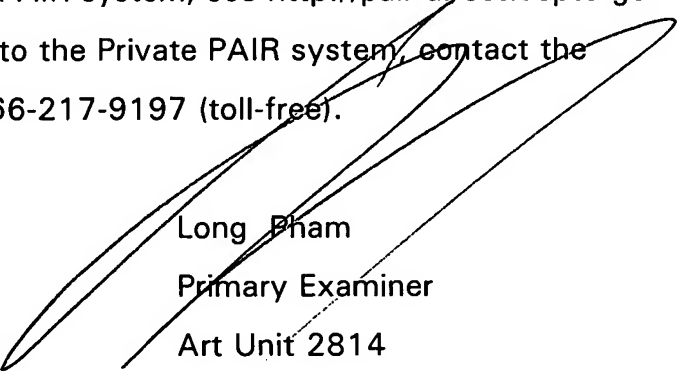
Any inquiry concerning this communication or earlier communications from the examiner should be directed to Long Pham whose telephone number is 703-308-1092. The examiner can normally be reached on M-F, 8:30AM-5:00PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Wael Fahmy can be reached on 703-308-4918. The fax

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phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



Long Pham  
Primary Examiner  
Art Unit 2814

LP